

## LIQUID CRYSTAL DISPLAY

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EC Classification:

Equivalents:

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### Abstract

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**PROBLEM TO BE SOLVED:** To provide a liquid crystal display capable of carefully saving of power consumption by stopping the drive while keeping a display state as it is, providing an operation mode for putting off a back light and a switch for turning on/off the back light independent of a panel controller.

**SOLUTION:** In a power consumption mode 1, when an idle state is continued for a fixed time more and no input is given by an operator, the mode is shifted to a power consumption mode 2, a back light 212 is put off in addition to the power consumption mode 1, the moreover reduction of power consumption is attained but the last display contents at the time of driving is continuously maintained. Consequently, by putting on the back light by turning on a BL switch 107 by the operator, the displayed contents of the liquid crystal display is temporarily confirmed. Since the BL switch 107 directly turns on/off the power source of a lighting circuit 216, the starting of a CPU 201 in the mode of power consumption is not necessary.

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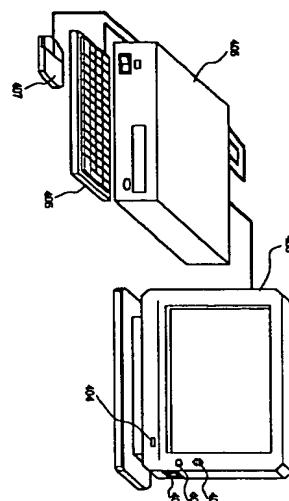




[図3]

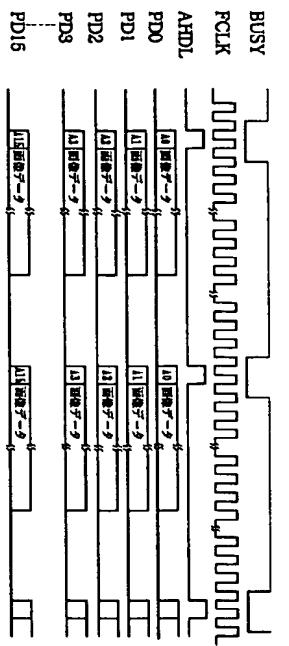
RUN モード	省電力モード	OFF モード
CPU	省電力モード1 ON	OFF
HDD	省電力モード2 ON	OFF
キー・ボーット	操作により RUN モードへ ON	OFF
液晶パネル	直前の表示状態を維持 ON	OFF
バックライト	直前の表示状態を維持 ON	OFF

\*: BL スイッチ操作により一時的にON



[図4]

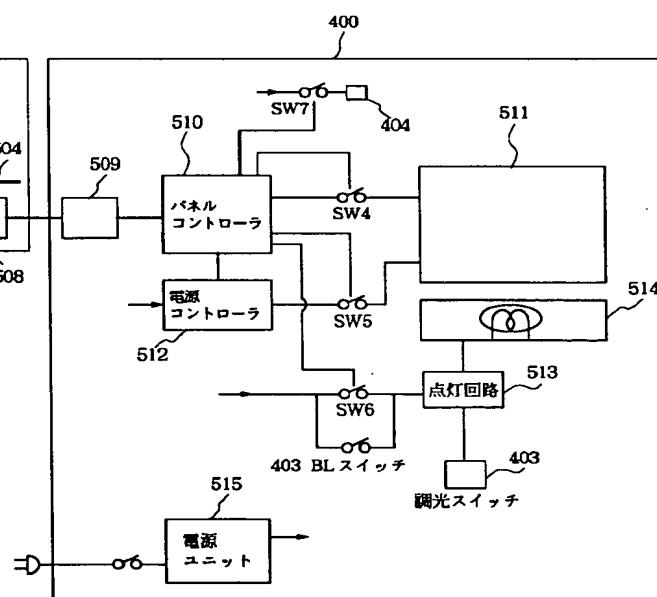
[図7]



[図19]

走査アドレス  
EEPROM  
MSB  
LSB

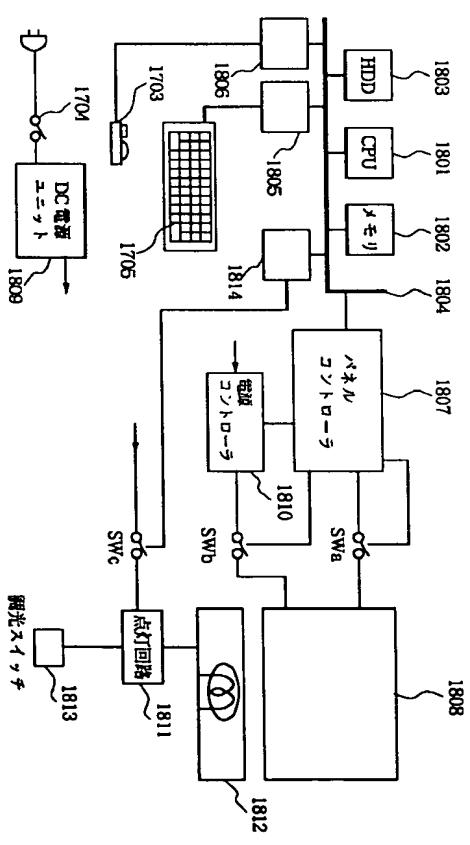
[図5]



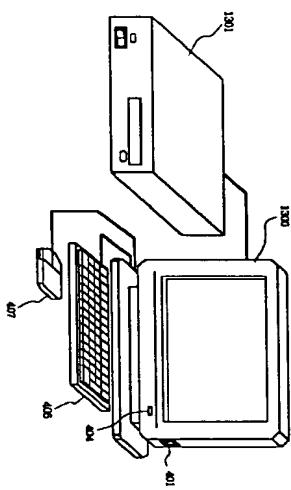
[図8]

RUN モード	省電力モード		STOP モード	OFF モード
	省電力モード1	省電力モード2		
液晶パネル	ON	直前の表示状態を維持	OFF	OFF
バックライト	ON	OFF *	OFF	OFF
LED	ON	点滅	ON	OFF

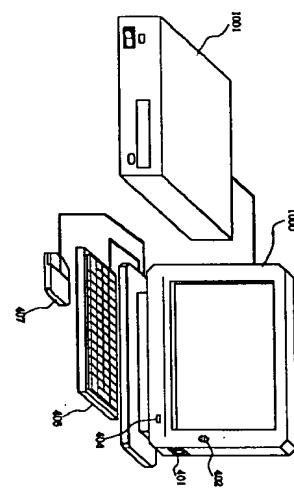
\*: BL スイッチ操作により一時的にON



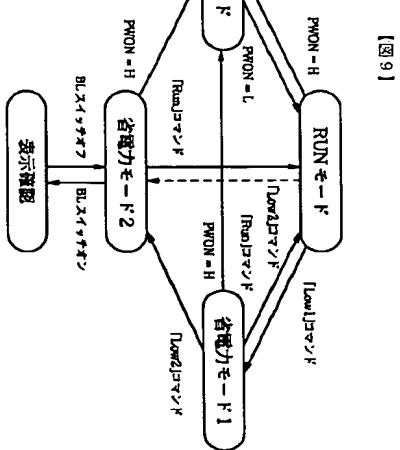
[四] 181



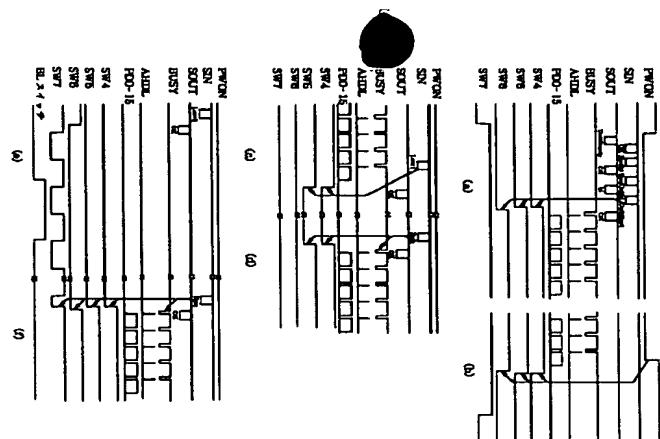
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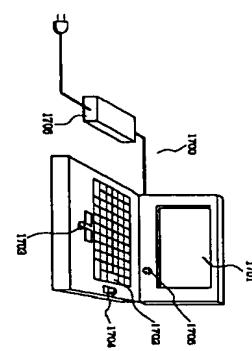
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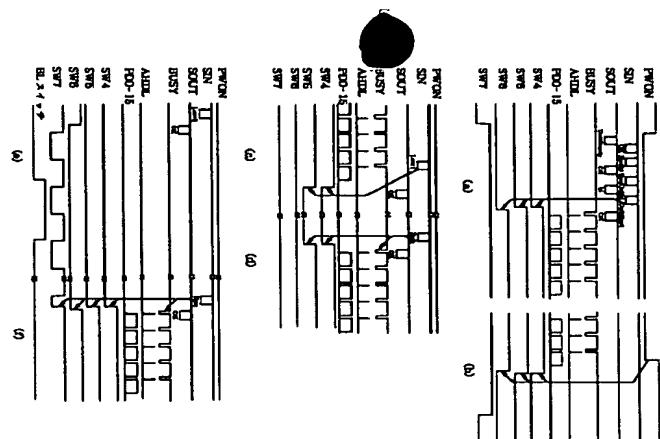
一六四



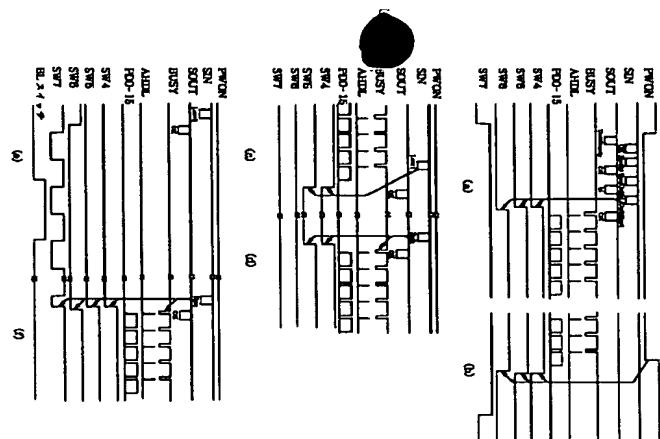
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141

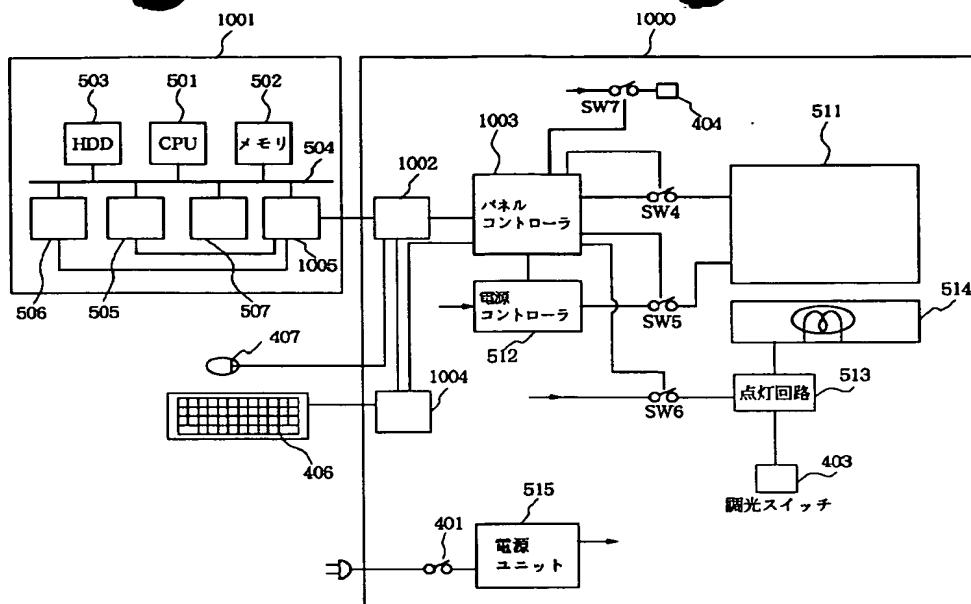


191



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[図11]

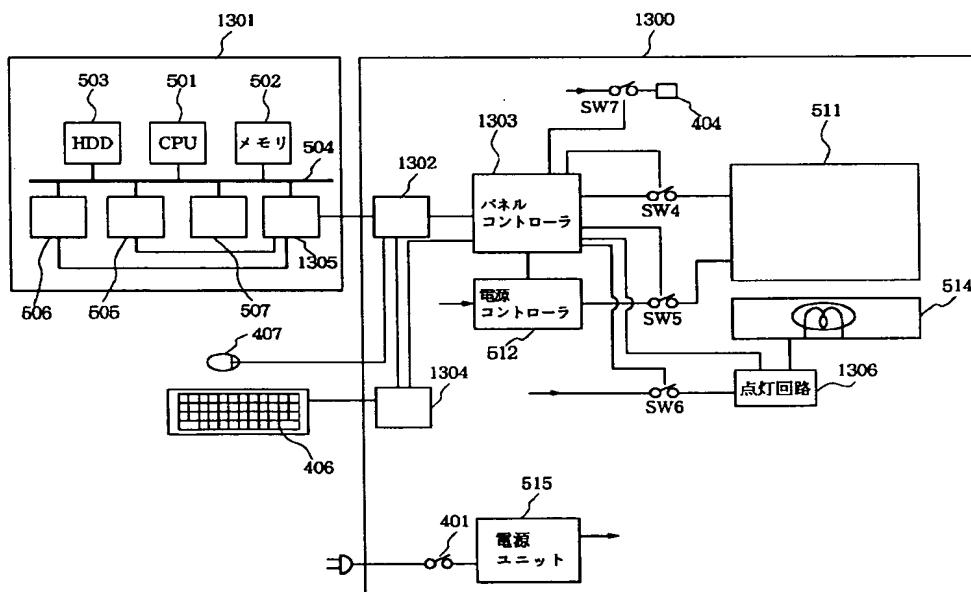


[図12]

RUN モード	省電力モード		STOP モード	OFF モード
	省電力モード1	省電力モード2		
液晶パネル	ON	直前の表示状態を維持	OFF	OFF
バックライト	ON	ON	OFF *	OFF
LED	ON	ON	点滅	ON
キーコード監視	through	through	監視	-

\*: ホットキーの操作により一定時間ON→OFF

[図14]



[図15]

RUN モード	省電力モード		STOP モード	OFF モード
	省電力モード1	省電力モード2		
液晶パネル	ON	直前の表示状態を維持	OFF	OFF
バックライト	ON **	ON **	OFF **	OFF
LED	ON	ON	点滅	ON
キーコード監視	監視	監視	監視	-

\*\*: ホットキーの操作により一定時間ON→OFF

\*\*: ホットキーの操作により点滅

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